

EXHIBIT 4

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

GOOGLE LLC,

Plaintiff and Counter-defendant,

v.

SONOS, INC.,

Defendant and Counter-claimant.

Case No. 3:20-cv-06754-WHA
Related to Case No. 3:21-cv-07559-WHA

**REPLY EXPERT REPORT OF
DR. KEVIN C. ALMEROOTH**

1 playing music or not playing music, which varies based on the current operation of the group.”
2 See Schonfeld Rebuttal Report at ¶ 88. I disagree.

3 128. As a starting point, newly-released firmware version 1.56.324896 has no impact on
4 the observable behavior of an Accused Google Player in a scenario where the Accused Google
5 Player is configured for individual playback (rather than grouped playback) but is not currently
6 engaged in active playback at the time that it is added to a new speaker group. Indeed, in such a
7 scenario, an Accused Google Player installed with newly-released firmware version 1.56.324896
8 behaves in the same way that Accused Google Players installed with prior firmware versions
9 behaved, namely, the Accused Google Player handles the join_group message received from the
10 Accused Google Controller without leaving “standalone mode” or making any change to the
11 Accused Google Player’s inactive playback state. Thus, because an Accused Google Player
12 installed with newly-released firmware version 1.56.324896 behaves in the same way that Accused
13 Google Players installed with prior firmware versions behaved in at least one of the infringing
14 scenarios that was presented to the Court as part of Sonos’s summary judgment motion, it is my
15 opinion that Accused Google Players installed with newly-released firmware version 1.56.324896
16 still infringe Asserted Claim 1 of the ’885 Patent for the same reasons discussed in the Court’s
17 July 21, 2022 order.

18 129. Moreover, even focusing on a scenario where an Accused Google Player installed
19 with firmware version 1.56.324896 is configured for individual playback and is currently engaged
20 in active playback at the time that it is added to a new speaker group, I disagree with Dr.
21 Schonfeld’s opinion that such an Accused Google Player “*begins operating as a member*
22 *of the group*, for example by playing music or not playing music,” which is contradicted by the
23 evidence I have reviewed.

24 130. For example, the testing I observed demonstrated that an Accused Google Player
25 installed with firmware version 1.56.324896 does not start operating in a grouped mode when it is
26 added to a new speaker group. See Section IX.A. This is confirmed by the fact that (i) the new
27 speaker group is not launched or otherwise activated at the time it is created and (ii) the only
28 observable change in the behavior of the Accused Google Player being added to the new speaker

1 released prior to that time. Thus, even setting aside the other flaws with Dr. Schonfeld's first non-
2 infringement theory for claim limitations 1.4-1.9 that I will address next, this theory fails to provide
3 a basis for non-infringement of Asserted Claim 1 of the '966 Patent for any Accused Google
4 Controllers that were made and/or used prior to December 13, 2022.¹³

5 163. Second, this non-infringement theory is premised on Dr. Schonfeld's opinion that
6 when an Accused Google Player installed with firmware version 1.56.324896 is added to a new
7 speaker group via an Accused Google Controller, the Accused Google Player stops operating in
8 "standalone mode" and "immediately begins operating as a member of the group." *See* Schonfeld
9 Rebuttal Report at ¶¶ 104-115. However, I disagree with this opinion for similar reasons to those
10 already explained above in connection with Asserted Claim 1 of the '885 Patent.

11 164. For instance, as a starting point, newly-released firmware version 1.56.324896 has
12 no impact on the observable behavior of an Accused Google Player in a scenario where the
13 Accused Google Player is configured for individual playback but is not currently engaged in active
14 playback at the time that it is added to a new speaker group. Indeed, in such a scenario, an Accused
15 Google Player installed with newly-released firmware version 1.56.324896 behaves in the same
16 way that Accused Google Players installed with prior firmware versions behaved, namely, the
17 Accused Google Player handles the join_group message received from the Accused Google
18 Controller without leaving "standalone mode" or making any change to the Accused Google
19 Player's inactive playback state. Thus, because an Accused Google Player installed with newly-
20 released firmware version 1.56.324896 behaves in the same way that Accused Google Players

21
22 ¹³ In addition to the fact that this theory does not apply to Accused Google Controllers were made
23 and/or used prior to December 13, 2022, my understanding is that every Accused Google
24 Controller in existence today remains programmed with the functional capability to control
25 systems that include Accused Google Players installed with prior firmware versions. In other
26 words, my understanding is that if an Accused Google Controller is connected to a system in which
27 one or more of the Google Accused Players have not been updated to new firmware version
28 1.56.324896, the Accused Google Controller still has the functional capability to carry out the
accused operations in such a system – including the functional capability for creating new speaker
groups sharing a common member and then invoking a selected one of the speaker group. Thus,
even setting aside the other flaws with this theory discussed herein, Dr. Schonfeld's reliance on
new firmware version 1.56.324896 for the Accused Google *Players* fails to provide a basis for
non-infringement of Asserted Claim 1 of the '966 Patent by the Accused Google *Controllers*.

1 installed with prior firmware versions behaved in at least one of the infringing scenarios that was
2 presented to the Court as part of Sonos's summary judgment motion, it is my opinion that Accused
3 Google Players installed with newly-released firmware version 1.56.324896 satisfy the
4 "standalone mode" limitation of Asserted Claim 1 of the '966 Patent for the same reasons that
5 Accused Google Players installed with prior firmware versions satisfied the "standalone mode"
6 limitation of Asserted Claim 1 of the '966 Patent.

7 165. Moreover, even focusing on a scenario where an Accused Google Player installed
8 with firmware version 1.56.324896 is configured for individual playback and is currently engaged
9 in active playback at the time that it is added to a new speaker group, I disagree with Dr.
10 Schonfeld's opinion that such an Accused Google Player "*begins operating as a member*
11 *of the group*, for example by playing music or not playing music," which is contradicted by the
12 evidence I have reviewed.

13 166. For example, the testing I observed demonstrated that an Accused Google Player
14 installed with firmware version 1.56.324896 does not start operating in a grouped mode when it is
15 added to a new speaker group. *See* Section IX.A. This is confirmed by the fact that (i) the new
16 speaker group is not launched or otherwise activated at the time it is created and (ii) the only
17 observable change in the behavior of the Accused Google Player being added to the new speaker
18 group is that if the Accused Google Player was engaging in active playback prior to being added
19 to the new speaker group, it stops that active playback. *Id.* Thus, there was nothing in the testing
20 even suggesting that an Accused Google Player installed with firmware version 1.56.324896 starts
21 operating in a grouped mode when it is added to a new speaker group.

22 167. Consistent with the testing I observed, the source code for firmware version
23 1.56.324896 shows that when an Accused Google Player is added to a new speaker group, the only
24 difference in operation relative to prior firmware versions is that the Accused Google Player is
25 now programmed to execute a "StopCurrentApp()" function. And as already explained above, this
26 "StopCurrentApp()" function does not cause the Accused Google Player to start operating in a
27 grouped mode or to otherwise engage in any behavior in accordance with a speaker group. Instead,
28 the "StopCurrentApp()" function merely causes the Accused Google Player to stop its currently-

1 supplement this Reply Report in view of Mr. MacKay's additional deposition testimony.

2 290. If I am requested to do so, I may respond to additional statements made, or
3 discovery provided, by Google, or opinions submitted by expert witnesses on behalf of Google. I
4 may do this in a responsive report or in a supplemental report as appropriate.

5 291. I expect to testify at trial regarding the matters set forth in this report, if asked about
6 these matters by the Court or by the parties' attorneys.

7
8
9 Dated: January 23, 2023

By:


Kevin C. Almeroth